Remarks

Claims 1-33 are at issue. Claim 1-14 & 29-33 stand rejected under 35 USC 101 because the claims are directed to non-statutory subject mater. Claims 1 & 7 stand rejected under 35 USC 103(a) as being unpatentable over Nehab et al (USPN 6,029,182) in view of Motoyama (USPN 5,848,386) and further in view of Voigt et al (USPN 5,537,534). Claims 2-3 stand rejected under 35 USC 103(a) as being unpatentable over Nehab et al (USPN 6,029,182) in view of Motoyama (USPN 5,848,386) and further in view of Voigt et al (USPN 5,537,534) further in view of Combs (USPN 6,138,129). Claim 4 stand rejected under 35 USC 103(a) as being unpatentable over Nehab et al (USPN 6,029,182) in view of Motoyama (USPN 5,848,386) and further in view of Voigt et al (USPN 5,537,534) further in view of Combs, further in view of Eliovson (USPN 6,128,618). Claims 5-6 & 8 stand rejected under 35 USC 103(a) as being unpatentable over Nehab et al (USPN 6,029,182) in view of Motoyama (USPN 5,848,386) and further in view of Voigt et al (USPN 5,537,534) further in view of Combs, further in view of Eliovson (USPN 6,128,618), further in view of Crus et al (USPN 5,133,068). Claims 9-10 & 13 stand rejected under 35 USC 103(a) as being unpatentable over Nehab et al (USPN 6,029,182) in view of Motoyama (USPN 5,848,386) and further in view of Voigt et al (USPN 5,537,534) further in view of Combs, further in view of Eliovson (USPN 6,128,618) further in view of Crus, further in view of Curtis et al (USPN 6,278,992). Claim 11-12 stand rejected under 35 USC 103(a) as being unpatentable over Nehab et al (USPN 6,029,182) in view of Motoyama (USPN 5,848,386) and further in view of Voigt et al (USPN 5,537,534) further in view of Combs, further in view of Crus, further in view of Curtis, further in view of Godwin (USPN 6,505,192 B1). Claim 12 stands rejected under 35 USC 103 (a) as being unpatentable over Nehab, Motoyama, Voigt, Alston, Jr.(USPN 5,315,709). Claims 15-17 & 23-28 12 stands rejected under 35 USC 103 (a) as being unpatentable over Nehab, Motoyama, Voigt, Takagi (USPN 4,812,969). Claims 18-19 & 21-22 12 stand rejected under 35 USC 103 (a) as being unpatentable over Nehab, Motoyama, Voigt, Takagi and Combs. Claim 20 stands rejected under 35 USC 103 (a) as being unpatentable over Nehab, Motoyama, Voigt, Takagi and Kozol.

A number of minor changes have been made to the claims to overcome minor typographical errors. These changes should address the claim objections to claims 6, 15, 27. With respect to claim 10, the applicants respectfully disagree with the Examiner that step (j) is indefinite. Claim 10 depends from claim 9 and step (h) of claim 9 states that "when the tag is not unique". Thus it is clear that when the tag is not unique and a duplicate flag has not already been set (first repeat of the flag), the duplicates flag is set. The rejection of claim 10 should be withdrawn.

35 USC 101

The Examiner states that the claims are directed to non-statutory subject matter because "the inventions may be performed by human means, without technological intervention".

The invention described herein achieves the technological result of reducing the amount of computer memory required to store structured data documents, such as XML documents. As a result, it also reduces the amount of bandwidth required to transmit an XML document. (See Background of the Invention page 3, line 9-15; and Page 15 lines 14-18). Clearly the invention has an observable result and solves a pressing technical problem.

If the criteria, as applied by the Examiner, were true that inventions that could be performed solely by a human were non-statutory then Nehab patent (US 6,029,182) is directed to non-statutory matter. Clearly the data in a hypermedia article could be reorganized by a human being without the aid of technology into another format. More broadly any invention directed to calculating error codes or directed to data compression schemes could be performed by a human without technological intervention.

The present application is directed to a useful, technological result – reducing the computer memory required to store a structured data document, e.g., an XML document. The rejection under 35 USC 101 must be withdrawn.

35 USC 103(a)

Claim 1 requires receiving a flattened structured data document and storing a data entry in a dictionary store. Nehab is directed to converting Web hypermedia documents into "newspaper" like documents. There is no discussion of a line of the flattened data document containing tags, a data entry and a plurality of formatting characters.

The section of Motoyama pointed to by the Examiner does not discuss storing data entries in the dictionary. Motoyama only discusses storing tags and associated dictionary rules.

Claim 1 also requires storing format characters, tag dictionary offsets and data dictionary offset in a map store. The Examiner points to Voigt. Voigt deals with a disk storage array. The map store is a map of how the data is stored in all the separate disks and has nothing to do with storing format characters, tag dictionary offsets and data dictionary offset.

The combination of Nehab, which is directed to converting Web hypermedia documents into "newspaper" like documents, with Motoyama, which is directed to translating text documents from a first human language into a second human language, with Voigt, which deals with disk array storage systems does not lead to the present invention. There is no way to use the dictionary of Motoyama with Nehab since Nehab has no need to store tags. The logical combination of Nehab and Motoyama is a device to translate Web hypermedia documents into "newspaper" like documents in another language. The only way to combine this with Voigt is to store this information on a disk array storage system. This is not what is claimed or described by the present invention. Clearly the Examiner is using impermissible hindsight to attempt to reconstruct the invention using the applicants' claims and specification as a road map. Claim 1 is allowable.

Claim 7 requires that each line of the structured data document have a plurality of tags. The Examiner is incorrect that this is notoriously well known. If the Examiner believes this is well known he will have no problem finding a reference to support his position. Until then the Examiner has failed to make a prima facie case of obviousness. Claim 7 is allowable.

Claim 2 requires transforming a tag and storing the tag dictionary offset in a dictionary index pointed to by the tag transform. The Examiner points to Combs. The

section pointed to by the Examiner never discusses a dictionary index or transforming the tag. Clearly claim 2 is allowable.

Claim 3 transforming a data entry and storing the data entry offset in a dictionary index. The Examiner points to Combs. The section pointed to by the Examiner never discusses a dictionary index or transforming the data entry. Clearly claim 3 is allowable.

Claim 4 requires determining if a tag is unique. The Examiner points to Eliovson. A word search of Eliovson shows that the word "tag" never appears in Eliovson. The Examiner has not established a prima facie case of obviousness. Claim 4 is allowable.

Claim 5 requires determining if a tag pointer is in a dictionary index. The Examiner points to Crus. A word search of Crus shows that the word "tag" never appears in Crus. The Examiner has not established a prima facie case of obviousness. Claim 5 is allowable.

Claim 6 requires a tag pointer. The Examiner points to Crus. A word search of Crus shows that the word "tag" never appears in Crus. The Examiner has not established a prima facie case of obviousness. Claim 6 is allowable.

Claim 8 requires determining if a tag is unique. The Examiner points to Crus. A word search of Crus shows that the word "tag" never appears in Crus. The Examiner has not established a prima facie case of obviousness. Claim 8 is allowable.

Claim 9 requires a tag. The Examiner points to Curtis. A word search of Curtis shows that the word "tag" never appears in Curtis. The Examiner has not established a prima facie case of obviousness. Claim 9 is allowable.

Claim 10 requires a duplicates count. The Examiner points to Curtis. A word search of Curtis shows that the words "duplicates count" never appear in Curtis. The Examiner has not established a prima facie case of obviousness. Claim 10 is allowable.

Claim 13 requires an instance count. The Examiner points to Curtis. A word search of Curtis shows that the words "instance count" never appear in Curtis. The Examiner has not established a prima facie case of obviousness. Claim 13 is allowable.

Claim 11 requires an instance count for a tag. The Examiner points to Godwin. Godwin does discuss instance counts of static table. Note that this relates to the

number of times the table has been changed not the number of duplicates. Claim 11 is allowable.

Claim 12 requires a second instance tag transform. The Examiner points to Godwin. Godwin does discuss instance counts of static table. Note that this relates to the number of times the table has been changed not the number of duplicates. Claim 12 is allowable.

Claim 14 requires a map index. The Examiner points to Alston. A word search of Alston shows that the words "map index" never appear in Alston. The Examiner has not established a prima facie case of obviousness. Claim 14 is allowable.

Claim 15 requires a map store, dictionary pointer and associative index. None of the references show a map store among other missing elements. The Examiner points to Voigt as showing map store. Voigt deals with a disk storage array. The map store is a map of how the data is stored in all the separate disks and has nothing to do with storing format characters, tag dictionary offsets and data dictionary offset.

The combination of Nehab, which is directed to converting Web hypermedia documents into "newspaper" like documents, with Motoyama, which is directed to translating text documents from a first human language into a second human language, with Voigt, which deals with disk array storage systems does not lead to the present invention. There is no way to use the dictionary of Motoyama with Nehab since Nehab has no need to store tags. The logical combination of Nehab and Motoyama is a device to translate Web hypermedia documents into "newspaper" like documents in another language. The only way to combine this with Voigt is to store this information on a disk array storage system. This is not what is claimed or described by the present invention. Clearly the Examiner is using impermissible hindsight to attempt to reconstruct the invention using the applicants' claims and specification as a road map. Claim 15 is allowable.

Claim 16 requires a flattener that flattens a structured data document. Nehab is directed to converting Web hypermedia documents into "newspaper" like documents. There is no discussion of a flattener of a structured data document. Nehab only discusses flattening the tree structure not the document. Claim 16 is allowable.

Claim 17 requires a parser. None of the references cited by the Examiner disclose a parser. The Examiner has not established a prima facie case of obviousness. Claim 17 is allowable.

Claim 23 is allowable as being dependent upon an allowable base claim.

Claim 24 requires that the format characters indicate a first new tag in the line. The Examiner is incorrect that this is notoriously well known. If the Examiner believes this is well known he will have no problem finding a reference to support his position. Until then the Examiner has failed to make a prima facie case of obviousness. Claim 24 is allowable.

Claim 25 requires that the format characters indicate the number of consecutive tags. The Examiner is incorrect that this is notoriously well known. If the Examiner believes this is well known he will have no problem finding a reference to support his position. Until then the Examiner has failed to make a prima facie case of obviousness. Claim 25 is allowable.

Claim 26 requires that the format characters indicate a parent line number. The Examiner is incorrect that this is notoriously well known. If the Examiner believes this is well known he will have no problem finding a reference to support his position. Until then the Examiner has failed to make a prima facie case of obviousness. Claim 26 is allowable.

Claim 27 requires that the format characters indicate if an inserted line. The Examiner is incorrect that this is notoriously well known. If the Examiner believes this is well known he will have no problem finding a reference to support his position. Until then the Examiner has failed to make a prima facie case of obviousness. Claim 27 is allowable.

Claim 28 requires a tag dictionary store and data dictionary store. The section of Motoyama pointed to by the Examiner does not discuss storing data entries in the dictionary. Motoyama only discusses storing tags and associated dictionary rules. Claim 28 is allowable.

Claim 18 requires a data transform. The section pointed to by the Examiner never discusses a transforming the data entry. Clearly claim 18 is allowable.

Claim 19 requires a dictionary pointer. The section pointed to by the Examiner never discusses a dictionary pointer. Clearly claim 19 is allowable.

Claim 21 requires the address be associated with a tag transform. There is no discussion in any of the references cited by the Examiner of an address be associated with a tag transform. Claim 21 is allowable.

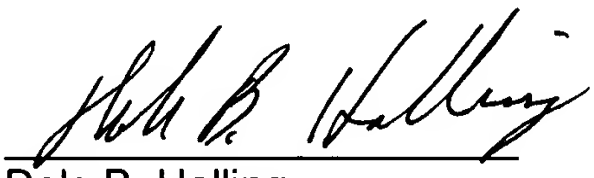
Claim 22 requires is allowable for the same reasons as claim 21.

Claim 20 is allowable as being dependent upon an allowable base claim.

The application has been placed in condition for allowance, prompt reconsideration and allowance are respectfully requested.

Respectfully submitted,

(Brandin)

By 

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I hereby certify that a Response is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, P.O. Box 1450, Alexandria, VA 22313-1450, on:

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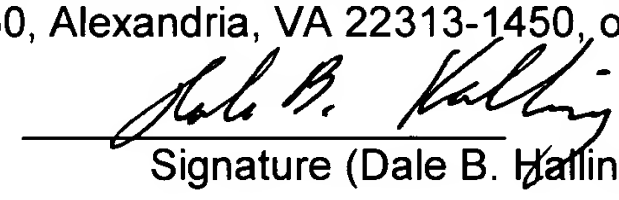
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